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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/822,581	04/12/2004	Robert Burgmeier	S63.2-10865-US01	2645
490	7590	12/27/2005	EXAMINER	
VIDAS, ARRETT & STEINKRAUS, P.A. 6109 BLUE CIRCLE DRIVE SUITE 2000 MINNETONKA, MN 55343-9185			TRAN, THAO T	
			ART UNIT	PAPER NUMBER
			1711	

DATE MAILED: 12/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/822,581

Applicant(s)

BURGMEIER ET AL.

Examiner

Thao T. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 October 2005 and 16 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 30-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 30-44 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/16/05</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. This is in response to the Amendment filed on 10/04/2005 and 9/16/2005. The IDS filed on 9/16/2005 is also acknowledged.
2. Claims 1-13 and 30-44 are currently pending in this application. Claims 14-29 have been canceled. Claims 31-44 have been newly added. Claim 1 has been amended.

### ***Claim Rejections - 35 USC § 112***

3. In view of the Office action of 6/17/2005, the rejection of claims 1-13 under 35 U.S.C. 112, second paragraph, has been withdrawn due to the Amendment made thereto.
4. Claim 44 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 44 is indefinite because the claim recites a method depending upon an article claim without reciting any steps. If Applicants mean to indicate this as a laminate as in claim 43, please state so.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claim 30 is rejected under 35 U.S.C. 102(b) as being anticipated by Wang et al. (US Pat. 5,195,969) or Samuelson et al. (US Pat. 6,464,683).

Wang teaches a laminate in a medical balloon or a catheter, the laminate comprising an innermost layer of polyethylene, an outermost layer of Nylon (polyamide), and a layer of Plexar sandwiched in between. Plexar is an anhydride-modified polyolefin. (See Figs 3-4; col. 4, ln. 14-15, 46-49).

Samuelson teaches a laminate in a medical tubing, the laminate comprising an outer layer 16, a core layer 12, and an intermediate tie layer 14 interposed between the outer layer and the core layer (see abstract; Fig. 1). The outer layer comprises a polyester or polyamide; the core layer comprises a polyethylene; and the intermediate tie layer comprises a polymeric material comprising functionality capable of adhering outer layer 16 to core layer 12. (See col. 6, ln. 5-6, 41-45, 57-59). The polymer of the intermediate tie layer comprises modified olefinic polymer having an anhydric moiety or maleic acid (see col. 7, ln. 12-51).

7. Claims 1-12, 30-37, 39-40, and 43 are rejected under 35 U.S.C. 102(b) as being anticipated by Boer et al. (US Pat. 6,355,358). This reference is cited by Applicants in the IDS of 9/16/2005.

Boer discloses an article comprising a thermoplastic multilayer composite. The multilayer composite has at least one layer I, at least one layer II, and an adhesion promoter (tie layer) disposed in between layer I and layer II (see abstract).

Boer further discloses that layer I comprises a polyamide molding composition. Layer II comprises a polyester molding composition (see col. 6, ln. 1-2). The adhesion promoter

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comprises at least 5% by weight of a graft copolymer prepared from the following monomers:

(a) a polyamine and (b) polyamide-forming monomers selected from lactams, aminocarboxylic acid, and/or equimolar combinations of diamine and dicarboxylic acid (see paragraph bridging col. 2-3), and 0.01-4.2 mol of an oligocarboxylic acid (see col. 4, ln. 8-13), which appears to meet the requirement of the coupling agent in the presently claimed invention.

The adhesion promoter layer in the invention of Boer further comprises polyamide and polyester (see paragraph bridging col. 7-8). The polymer composition in the adhesion promoter layer is crosslinked and a melt (see col. 5, ln. 22-44).

With respect to how the polymer is crosslinked, it has been within the skill in the art that how crosslinking of the polymer occurs would have no significant patentable weight.

The polyamide composition in layer I further contains ethylene-propylene copolymers or aliphatic olefin copolymers (see col. 6, ln. 39-48).

### ***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang or Samuelson in view of Shimura et al. (US Pat. 5,441,488).

Wang teaches a laminate in a medical balloon or a catheter, the laminate comprising an innermost layer of polyethylene, an outermost layer of Nylon (polyamide), and a layer of Plexar

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sandwiched in between. Plexar is an anhydride-modified polyolefin. (See Figs 3-4; col. 4, ln. 14-15, 46-49).

Samuelson teaches a laminate in a medical tubing, the laminate comprising an outer layer 16, a core layer 12, and an intermediate tie layer 14 interposed between the outer layer and the core layer (see abstract; Fig. 1). The outer layer comprises a polyester or polyamide; the core layer comprises a polyethylene; and the intermediate tie layer comprises a polymeric material comprising functionality capable of adhering outer layer 16 to core layer 12. (See col. 6, ln. 5-6, 41-45, 57-59). The polymer of the intermediate tie layer comprises modified olefinic polymer having an anhydric moiety or maleic acid (see col. 7, ln. 12-51).

However, neither Wand nor Samuelson teaches the amount of the modifying compound of the polyolefin in the intermediate layer.

Shimura teaches a modified polyolefin as an adhesive in a laminate, the modified polyolefin comprising maleic anhydride is deposited on polyolefin or polyamide (see col. 4, ln. 51-56; col. 5, ln. 1-7). The content of acid anhydride is 0.5-50% (see col. 5, ln. 9-10). The composition further comprises a catalyst, such as tertiary amine, to promote the reaction of the acid anhydride (see col. 5, ln. 40-43).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have employed the modified polyolefin with the acid anhydride content and the catalyst, as taught by Shimura, in the tie layer of Wang or Samuelson, for the purpose of enhancing adhesion between the tie layer and the outer and inner layer. This is because Shimura teaches that the use of such modified polyolefin and catalyst would have improved bonding and crosslinking between the modified polyolefin and polyamide or polyester.

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10. Claims 12-13, 38, and 41-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boer as applied to claims 1 and 30 above, and further in view of Shimura.

Boer is as set forth in claims 1 and 30 above and incorporated herein.

Boer does not teach the use of an acid anhydride-modified polyolefin or a catalyst.

Shimura teaches a modified polyolefin as an adhesive in a laminate, the modified polyolefin comprising maleic anhydride is deposited on polyolefin or polyamide (see col. 4, ln. 51-56; col. 5, ln. 1-7). The composition further comprises a catalyst, such as tertiary amine, to promote the reaction of the acid anhydride (see col. 5, ln. 40-43).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have employed the modified polyolefin with the acid anhydride content and the catalyst, as taught by Shimura, in the tie layer of Wang or Samuelson, for the purpose of enhancing adhesion between the tie layer and the outer and inner layer. Shimura teaches that the use of such modified polyolefin and catalyst would have improved bonding and crosslinking between the modified polyolefin and polyamide or polyester.

### ***Response to Arguments***

11. Applicant's arguments filed 9/16/2005 have been fully considered but they are not persuasive.

Applicants contend that neither Wang nor Samuelson teaches the tie layer having the same polymer as the first or second polymer in the layers. According to Applicants, the Plexar polymer in the invention of Wang is not the same polymer in the other layers of the laminate. While it is true that Plexar comprises several polymer structural grades; nevertheless it does

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comprise a modified polyethylene, which reads upon the presently claimed invention. The presently claimed invention and its specification do not disclose a polyolefin with a specific property, such as its molecular weight, but rather the polymers such as polyolefin or polyamide in general. Thus, in light of the specification, the examiner would interpret that so long as the tie layer having a polyolefin, polyamide, or other polymers presented in the inner and outer layers, the tie layer would have the same polymer of one of the other layers. The same arguments are presented with respect to Samuelson.

In response to applicant's argument that Shimura is nonanalogous art to Wang and Samuelson, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Shimura is used to illustrate that the use of a modified polyolefin comprising an acid anhydride in the recited range has been taught in the prior art, for the purpose of enhancing bonding and crosslinking between the layers. Moreover, it would have been obvious to one of ordinary skill in the art that the amount of the acid anhydride would have been adjusted in order to obtain the properties desired in the product.



*Conclusion*

12. Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on 9/16/2005 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609.04(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

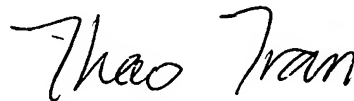
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thao T. Tran whose telephone number is 571-272-1080. The examiner can normally be reached on Monday-Friday, from 9:00 a.m. - 5:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink that reads "Thao Tran". The signature is written in a cursive, flowing style.

tt  
December 20, 2005

**THAO T. TRAN  
PATENT EXAMINER**